1635

3-1-02

OIPE

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            RAW SEQUENCE LISTING            DATE: 11/30/2001
            PATENT APPLICATION:  US/09/956,998    TIME: 15:51:30

            Input Set : N:\Crf3\RULE60\09956998.txt
            Output Set: N:\CRF3\11212001\I956998.raw
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ENTERED

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 4 <110> APPLICANT: Black Jr., Charles A.
 6 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR ACTIVATING
 7        GENES OF INTEREST
 9 <130> FILE REFERENCE: 5722-2(35722/191928)
11 <140> CURRENT APPLICATION NUMBER: 09/956,998
12 <141> CURRENT FILING DATE: 2001-09-20
14 <150> PRIOR APPLICATION NUMBER: 09/446,402
15 <151> PRIOR FILING DATE: 1999-12-20
17 <150> PRIOR APPLICATION NUMBER: 60/050,772
18 <151> PRIOR FILING DATE: 1997-06-25
20 <160> NUMBER OF SEQ ID NOS: 19
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 4279
26 <212> TYPE: DNA
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Recombinant Molecule containing multiple cloning
31        site, kozak sequence, LacZ gene.
33 <221> NAME/KEY: misc_feature
34 <222> LOCATION: (1)...(64)
35 <223> OTHER INFORMATION: Multiple cloning site
37 <221> NAME/KEY: misc_feature
38 <222> LOCATION: (65)...(79)
39 <223> OTHER INFORMATION: Consensus sequence for the "Kozak sequence"
40        (translation initiation)
42 <221> NAME/KEY: prim_transcript
43 <222> LOCATION: (80)...(4279)
44 <223> OTHER INFORMATION: Beta galactosidase
46 <400> SEQUENCE: 1
47 ttaatacgac tcactatagg ctagcctcga gaattcacgc gtggtacctc tagagtcgac      60
48 ccgggccgcc gccaccatgg cgcagcacca tggcctgaaa taacctctga aagaggaact     120
49 tggttaggta ccttctgagg cggaaagaac cagctgtgga atgtgtgtca gttagggtgt     180
50 ggaaagtccc caggctcccc agcaggcaga agtatgcaaa gcatgcatct caattagtca     240
51 gcaaccaggt gtggaaagtc cccaggctcc ccagcaggca gaagtatgca aagcatgcat     300
52 ctcaattagt cagcaaccat agtcccgccc ctaactccgc ccatcccgcc cctaactccg     360
53 cccagttccg cccattctcc gccccatggc tgactaattt tttttattta tgcagaggcc     420
54 gaggccgcct cggcctctga gctattccag aagtagtgag gaggcttttt tggaggccta     480
55 ggcttttgca aaaagcttgg gatctctata atctcgcgca acctattttc ccctcgaaca     540
56 cttttttaagc cgtagataaa caggctggga cacttcacat gagcgaaaaa tacatcgtca     600
57 cctgggacat gttgcagatc catgcacgta aactcgcaag ccgactgatg ccttctgaac     660
58 aatggaaagg cattattgcc gtaagccgtg gcggtctggt accggtgggt gaagaccaga     720
59 aacagcacct cgaactgagc cgcgatattg cccagcgttt caacgcgctg tatggcgaga     780
60 tcgatcccgt cgttttacaa cgtcgtgact gggaaaaccc tggcgttacc caacttaatc     840
61 gccttgcagc acatcccccct ttcgccagct ggcgtaatag cgaagaggcc cgcaccgatc     900
62 gcccttccca acagttgcgc agcctgaatg gcgaatggcg ctttgcctgg tttccggcac     960
63 cagaagcggt gccggaaagc tggctggagt gcgatcttcc tgaggccgat actgtcgtcg    1020
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 64 tcccctcaaa ctggcagatg cacggttacg atgcgcccat ctacaccaac gtaacctatc 1080
 65 ccattacggt caatccgccg tttgttccca cggagaatcc gacgggttgt tactcgctca 1140
 66 catttaatgt tgatgaaagc tggctacagg aaggccagac gcgaattatt tttgatggcg 1200
 67 ttaactcggc gtttcatctg tggtgcaacg ggcgctgggt cggttacggc caggacagtc 1260
 68 gtttgccgtc tgaatttgac ctgagcgcat ttttacgcgc cggagaaaac cgcctcgcgg 1320
 69 tgatggtgct gcgttggagt gacggcagtt atctggaaga tcaggatatg tggcggatga 1380
 70 gcggcatttt ccgtgacgtc tcgttgctgc ataaaccgac tacacaaatc agcgatttcc 1440
 71 atgttgccac tcgctttaat gatgatttca gccgcgctgt actggaggct gaagttcaga 1500
 72 tgtgcggcga gttgcgtgac tacctacggg taacagtttc tttatggcag ggtgaaacgc 1560
 73 aggtcgccag cggcaccgcg cctttcggcg gtgaaattat cgatgagcgt ggtggttatg 1620
 74 ccgatcgcgt cacactacgt ctgaacgtcg aaaacccgaa actgtggagc gccgaaatcc 1680
 75 cgaatctcta tcgtgcggtg gttgaactgc acaccgccga cggcacgctg attgaagcag 1740
 76 aagcctgcga tgtcggtttc cgcgaggtgc ggattgaaaa tggtctgctg ctgctgaacg 1800
 77 gcaagccgtt gctgattcga ggcgttaacc gtcacgagca tcatcctctg catggtcagg 1860
 78 tcatggatga gcagacgatg gtgcaggata tcctgctgat gaagcagaac aactttaacg 1920
 79 ccgtgcgctg ttcgcattat ccgaaccatc cgctgtggta cacgctgtgc gaccgctacg 1980
 80 gcctgtatgt ggtggatgaa gccaatattg aaacccacgg catggtgcca atgaatcgtc 2040
 81 tgaccgatga tccgcgctgg ctaccggcga tgagcgaacg cgtaacgcga atggtgcagc 2100
 82 gcgatcgtaa tcacccgagt gtgatcatct ggtcgctggg gaatgaatca ggccacggcg 2160
 83 ctaatcacga cgcgctgtat cgctggatca aatctgtcga tccttcccgc ccggtgcagt 2220
 84 atgaaggcgg cggagccgac accacggcca ccgatattat ttgcccgatg tacgcgcgcg 2280
 85 tggatgaaga ccagcccttc ccggctgtgc cgaaatggtc catcaaaaaa tggctttcgc 2340
 86 tacctggaga gacgcgcccg ctgatccttt gcgaatacgc ccacgcgatg ggtaacagtc 2400
 87 ttggcggttt cgctaaatac tggcaggcgt ttcgtcagta tccccgttta cagggcggct 2460
 88 tcgtctggga ctgggtggat cagtcgctga ttaaatatga tgaaaacggc aacccgtggt 2520
 89 cggcttacgg cggtgatttt ggcgatacgc cgaacgatcg ccagttctgt atgaacggtc 2580
 90 tggtctttgc cgaccgcacg ccgcatccag cgctgacgga agcaaaacac cagcagcagt 2640
 91 ttttccagtt ccgtttatcc gggcaaacca tcgaagtgac cagcgaatac ctgttccgtc 2700
 92 atagcgataa cgagctcctg cactggatgg tggcgctgga tggtaagccg ctggcaagcg 2760
 93 gtgaagtgcc tctggatgtc gctccacaag gtaaacagtt gattgaactg cctgaactac 2820
 94 cgcagccgga gagcgccggg caactctggc tcacagtacg cgtagtgcaa ccgaacgcga 2880
 95 ccgcatggtc agaagccggg cacatcagcg cctggcagca gtggcgtctg gcggaaaacc 2940
 96 tcagtgtgac gctccccgcc gcgtcccacg ccatcccgca tctgaccacc agcgaaatgg 3000
 97 attttttgcat cgagctgggt aataagcgtt ggcaatttaa ccgccagtca ggctttcttt 3060
 98 cacagatgtg gattggcgat aaaaaacaac tgctgacgcc gctgcgcgat cagttcaccc 3120
 99 gtgcaccgct ggataacgac attggcgtaa gtgaagcgac ccgcattgac cctaacgcct 3180
100 gggtcgaacg ctggaaggcg gcgggccatt accaggccga agcagcgttg ttgcagtgca 3240
101 cggcagatac acttgctgat gcggtgctga ttacgaccgc tcacgcgtgg cagcatcagg 3300
102 ggaaaacctt atttatcagc cggaaaacct accggattga tggtagtggt caaatggcga 3360
103 ttaccgttga tgttgaagtg gcgagcgata caccgcatcc ggcgcggatt ggcctgaact 3420
104 gccagctggc gcaggtagca gagcgggtaa actggctcgg attagggccg caagaaaact 3480
105 atcccgaccg ccttactgcc gcctgttttg accgctggga tctgccattg tcagacatgt 3540
106 ataccccgta cgtcttcccg agcgaaaacg gtctgcgctg cgggacgcgc gaattgaatt 3600
107 atggcccaca ccagtggcgc ggcgacttcc agttcaacat cagccgctac agtcaacagc 3660
108 aactgatgga aaccagccat cgccatctgc tgcacgcgga agaaggcaca tggctgaata 3720
109 tcgacggttt ccatatgggg attggtggcg acgactcctg agcccgtca gtatcggcgg 3780
110 aattccagct gagcgccggt cgctaccatt accagttggt ctggtgtcaa aaataataat 3840
111 aaccgggcag gccatgtctg cccgtatttc gcgtaaggaa atccattatg tactatttaa 3900
112 aaaacacaaa cttttggatg ttcggtttat tctttttctt ttactttttt atcatgggag 3960
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113 cctacttccc gtttttcccg atttggctac atgacatcaa ccatatcagc aaaagtgata      4020
114 cgggtattat ttttgccgct atttctctgt tctcgctatt attccaaccg ctgtttggtc      4080
115 tgctttctga caaactcgga acttgtttat tgcagcttat aatggttaca aataaagcaa      4140
116 tagcatcaca aatttcacaa ataaagcatt tttttcactg cattctagtt gtggtttgtc      4200
117 caaactcatc aatgtatctt atcatgtctg gatcctctag agtcgacctg caggcatgca      4260
118 agctggcact ggccgtcgt                                                   4279
120 <210> SEQ ID NO: 2
121 <211> LENGTH: 20
122 <212> TYPE: DNA
123 <213> ORGANISM: Artificial Sequence
125 <220> FEATURE:
126 <223> OTHER INFORMATION: Synthetic oligonucleotide
128 <400> SEQUENCE: 2
129 gaatacaaag cttatgcatg                                                  20
131 <210> SEQ ID NO: 3
132 <211> LENGTH: 13
133 <212> TYPE: DNA
134 <213> ORGANISM: Artificial Sequence
136 <220> FEATURE:
137 <223> OTHER INFORMATION: Synthetic oligonucleotide
139 <400> SEQUENCE: 3
140 gaatacaaag ctt                                                         13
142 <210> SEQ ID NO: 4
143 <211> LENGTH: 20
144 <212> TYPE: DNA
145 <213> ORGANISM: Artificial Sequence
147 <220> FEATURE:
148 <223> OTHER INFORMATION: Synthetic oligonucleotide
150 <400> SEQUENCE: 4
151 aaagcttatg catgcggccg                                                  20
153 <210> SEQ ID NO: 5
154 <211> LENGTH: 20
155 <212> TYPE: DNA
156 <213> ORGANISM: Artificial Sequence
158 <220> FEATURE:
159 <223> OTHER INFORMATION: Synthetic oligonucleotide
161 <400> SEQUENCE: 5
162 cggccgcatc tagagggccc                                                  20
164 <210> SEQ ID NO: 6
165 <211> LENGTH: 25
166 <212> TYPE: DNA
167 <213> ORGANISM: Artificial Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Synthetic oligonucleotide
172 <400> SEQUENCE: 6
173 gcggccgcat ctagagggcc cggat                                            25
175 <210> SEQ ID NO: 7
176 <211> LENGTH: 24
177 <212> TYPE: DNA
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178 <213> ORGANISM: Artificial Sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: Synthetic oligonucleotide
183 <400> SEQUENCE: 7
184 aatacaaagc ttatgcatgc ggcc                                          24
186 <210> SEQ ID NO: 8
187 <211> LENGTH: 30
188 <212> TYPE: DNA
189 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Synthetic oligonucleotide
194 <400> SEQUENCE: 8
195 aatacaaagc ttatgcatgc ggccgcatct                                    30
197 <210> SEQ ID NO: 9
198 <211> LENGTH: 20
199 <212> TYPE: DNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Synthetic oligonucleotide
205 <400> SEQUENCE: 9
206 catgcataag ctttgtattc                                               20
208 <210> SEQ ID NO: 10
209 <211> LENGTH: 13
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Synthetic oligonucleotide
216 <400> SEQUENCE: 10
217 aagctttgta ttc                                                      13
219 <210> SEQ ID NO: 11
220 <211> LENGTH: 20
221 <212> TYPE: DNA
222 <213> ORGANISM: Artificial Sequence
224 <220> FEATURE:
225 <223> OTHER INFORMATION: Synthetic oligonucleotide
227 <400> SEQUENCE: 11
228 cggccgcatg cataagcttt                                               20
230 <210> SEQ ID NO: 12
231 <211> LENGTH: 20
232 <212> TYPE: DNA
233 <213> ORGANISM: Artificial Sequence
235 <220> FEATURE:
236 <223> OTHER INFORMATION: Synthetic oligonucleotide
238 <400> SEQUENCE: 12
239 gggccctcta gatgcggccg                                               20
241 <210> SEQ ID NO: 13
242 <211> LENGTH: 25
243 <212> TYPE: DNA
244 <213> ORGANISM: Artificial Sequence
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246 <220> FEATURE:
247 <223> OTHER INFORMATION: Synthetic oligonucleotide
249 <400> SEQUENCE: 13
250 atccgggccc tctagatgcg gccgc                                        25
252 <210> SEQ ID NO: 14
253 <211> LENGTH: 24
254 <212> TYPE: DNA
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Synthetic oligonucleotide
260 <400> SEQUENCE: 14
261 ggccgcatgc ataagctttg tatt                                         24
263 <210> SEQ ID NO: 15
264 <211> LENGTH: 30
265 <212> TYPE: DNA
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Synthetic oligonucleotide
271 <400> SEQUENCE: 15
272 agatgcggcc gcatgcataa gctttgtatt                                   30
274 <210> SEQ ID NO: 16
275 <211> LENGTH: 1798
276 <212> TYPE: RNA
277 <213> ORGANISM: Unknown
279 <220> FEATURE:
280 <223> OTHER INFORMATION: mRNA sequence for Firefly luciferase
282 <400> SEQUENCE: 16
283 gaauacaaag cuuaugcaug cggccgcauc uagagggccc ggauccaaau ggaagacgcc    60
284 aaaaacauaa agaaaggccc ggcgccauuc uauccucuag aggauggaac cgcuggagag   120
285 caacugcaua aggcuaugaa gagauacgcc cugguuccug gaacaauugc uuuuacagau   180
286 gcacauaucg aggugaacau cacguacgcg gaauacuucg aaauguccgu ucgguuggca    240
287 gaagcuauga aacgauaugg gcugaauaca aaucacagaa ucgucguaug cagugaaaac   300
288 ucucuucaau ucuuuaugcc ggugguuggg ccguuauuu aucggaguug caguugcgcc    360
289 cgcgaagcac auuuauaaug aacgugaauu gcucaacagu augaacauuu cgcagccuac   420
290 cguaguguuu guuuccaaaa aggguugca aaaauuuug aacgugcaaa aaaaauuacc     480
291 aauaauccag aaaauuauua ucauggauuc uaaaacggau uaccagggau uucagucgau   540
292 guacacguuc gucacaucuc aucuaccucc cgguuuuaau gaauacgauu uuguaccaga   600
293 guccuuugau cgugacaaaa caauugcacu gauaaugaau uccucggau cuacugggu     660
294 accuaagggu guggcccuuc cgcauagaac ugccugcguc agauucucgc augccagaga   720
295 uccuauuuuu ggcaaucaaa ucauuccgga uacugcgauu uuaaguguug uuccauucca   780
296 ucacgguuuu ggaauguuua cuacacucgg auauuugaua uguggauuuc gagucgucuu   840
297 aauguauaga uuugaagaag agcuguuuuu acgaucccuu caggauuaca aaauucaaag   900
298 ugcguugcua guaccaaccc uauuuucauu cuucgccaaa agcacucuga uugacaaaua   960
299 cgauuuaucu aauuuacacg aaauugcuuc uggggcgca ccucuuucga agaagucgg    1020
300 ggaagcgguu gcaaaacgcu uccaucuucc agggaucga caaggauaug ggcucacuga   1080
301 gacuacauca gcuauucuga uuacacccga gggggaugau aaaccgggcg cggucgguaa   1140
302 aguuguucca uuuuuugaag cgaagguugu ggaucuggau accgggaaaa cgcugggcgu   1200
303 uaaucagaga ggcgaauuau gugucagagg accuaugauu auguccgguu auguaaacaa   1260
304 uccggaagcg accaacgccu ugauugacaa ggauggaugg cuacauucug agacauagc    1320
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VERIFICATION SUMMARY   DATE: 11/30/2001
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Input Set : N:\Crf3\RULE60\09956998.txt
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